

CLAIMS

[1] A communication control device for communicating with a communication device b1 with a first communication function and communicating with a communication device a2 with a second communication function, comprising:

a first attribute information storage unit for storing attribute information regarding a third communication function of the communication device a2;

an accepting unit for accepting a request for communication from a user by means of a communication device having a communication function other than the first communication function and the second communication function;

an attribute information transmission unit for transmitting attribute information regarding the communication device a2 stored in the first attribute information storage unit to the communication device b1 with the first communication function based on the request accepted by the accepting unit;

an attribute information receiving unit for receiving attribute information that includes at least a communication address for a communication device b2 having the third communication function from the communication device b1 after the attribute information is transmitted by the attribute information transmission unit; and

a first attribute notifying unit for notifying the communication device a2 with the second communication function of the communication address obtained by the attribute information receiving unit.

[2] A communication control device according to claim 1, further comprising a first attribute information obtaining unit for obtaining attribute information regarding the communication function other than the first communication function and the second communication function from at least one communication device with the second communication function, wherein:

the first attribute information storage unit stores the attribute information obtained by the first attribute information obtaining unit.

[3] A communication control device according to claim 1, wherein the first attribute information storage unit stores attribute information regarding the

communication function other than the first communication function and the second communication function for each of a plurality of communication devices, the device further comprising:

a first extraction unit for extracting at least one communication device including, the communication device a2, stored in the first attribute information storage unit as candidates based on the attribute information, and wherein

the attribute information transmission unit transmits attribute information regarding the candidates extracted by the first extraction unit to the communication device b1 with the first communication function.

[4] A communication control device according to claim 3, wherein:

the attribute information stored in the first attribute information storage unit includes function information regarding the functions of the communication devices;

the accepting unit accepts designation of one of the functions stored in the first attribute information storage unit; and

the first extraction unit extracts the communication devices having the function accepted by the accepting unit as the candidates.

[5] A communication control device according to claim 3, wherein the attribute information receiving unit receives attribute information for at least one communication device having the communication function other than the first communication function and the second communication function, including the communication device b2, from the communication device b1, the device further comprising:

a first determining unit for determining an optimal combination of the communication devices based on the attribute information of the candidates extracted by the first extraction unit and the attribute information received by the attribute information receiving unit, wherein

the first attribute notifying unit will provide a communication address in accordance with the determination by the first determining unit.

[6] A communication control device according to claim 5, wherein the first determining unit evaluates all of the combinations of the candidates extracted by the

first extraction unit and the communication devices received by the attribute information receiving unit, receives evaluation results at the communication device b1 from the communication device b1, and determines the optimal combination of communication devices based on sums of both evaluation results.

[7] A communication control device for communicating with a communication device a1 with a first communication function, comprising:

a second attribute information storage unit for storing attribute information that includes at least a communication address for a third communication function of a communication device b2 different from the communication device a1;

a request receiving unit for receiving attribute information regarding a communication device a2 having the third communication function from the communication device a1; and

a response transmission unit for transmitting the attribute information that includes at least the communication address of the communication device b2 which is stored in the second attribute information storage unit to the communication device a1 with the first communication function, in response to the reception of the attribute information by the request receiving unit.

[8] A communication control device according to claim 7, wherein the communication control device is connected to the third communication device b2 with the second communication function, and the communication control device further comprises:

a second attribute notifying unit for notifying the communication device b2 of a communication address of the communication device a2 which is received by the request receiving unit with the second communication function.

[9] A communication control device according to claim 7, wherein the communication control device is connected to the third communication device b2 with the second communication function, the communication control device further comprising:

an attribute information obtaining unit for obtaining attribute information on

the communication function other than the first communication function and the second communication function from at least one communication device with the second communication function, wherein

the second attribute information storage unit stores the attribute information obtained by the attribute information obtaining unit.

[10] A communication control device according to claim 7, wherein:

the second attribute information storage unit stores attribute information on the communication function other than the first communication function and the second communication function for each of a plurality of communication devices; and

the request receiving unit receives attribute information regarding the communication function other than the first communication function and the second communication function for at least one communication device, including the communication device a2; and

the communication control device further comprising:

a second extraction unit for extracting at least one candidate for a communication device which has the communication function other than the first communication function and the second communication function, including the communication device b2, based on the attribute information of the communication device received by the request receiving unit, wherein

the response transmission unit transmits the attribute information of the candidates extracted by the second extraction unit to the communication device a1 with the first communication function.

[11] A communication control device according to claim 10, further comprising a second determining unit for determining an optimal combination of the communication devices based on the attribute information of the candidates extracted by the second extraction unit and the attribute information of the communication devices received by the request receiving unit.

[12] A communication control device according to claim 11, wherein the second determining unit evaluates all of the combinations of the candidates extracted by the

second extraction unit and the communication devices received by the request receiving unit, receives evaluation results at the communication device a1 from the communication device a1, and determines the optimal combination of communication devices based on sums of both evaluation results.

[13] A communication control method executed by a communication control device for communicating with a communication device b1 with a first communication function and communicating with a communication device a2 with a second communication function, comprising:

- a first attribute information storing step that stores attribute information regarding a third communication function of the communication device a2;

- an accepting step that accepts a request for communication from a user by means of a communication device having a communication function other than the first communication function and the second communication function;

- an attribute information transmission step that transmits attribute information of the communication device a2 stored in the first attribute information storing step to the communication device b1 with the first communication function based on the request accepted in the accepting step;

- an attribute information receiving step that receives attribute information that includes at least the communication address for a communication device b2 having the third communication function from the communication device b1, after the attribute information is transmitted in the attribute information transmission step; and

- a first attribute notifying step that notifies the communication device a2 of the communication address obtained in the attribute information receiving step with the second communication function.

[14] A communication control method executed by a communication control device for communicating with a communication device a1 with a first communication function, comprising:

- a second attribute information storing step that stores attribute information that includes at least a communication address for a third communication function of a

communication device b2 different from the communication device a1;

a request receiving step that receives attribute information regarding a communication device a2 having the third communication function from the communication device a1; and

a response transmission step that transmits the attribute information that includes at least the communication address of the communication device b2 which is stored in the second attribute information storing step to the communication device a1 with the first communication function, in response to reception of the attribute information in the request receiving step.